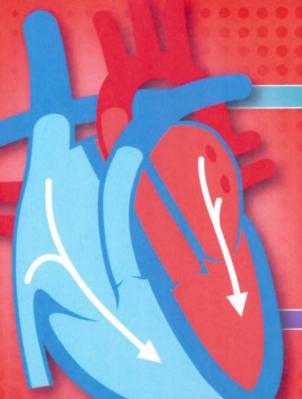
What to Know About Sudden Cardiac Arrest

- Sudden cardiac arrest (SCA) is a life-threatening emergency that occurs when the heart suddenly stops beating. SCA results in death if not treated within minutes.
- According to the Centers for Disease Control and Prevention, more than 300,000 SCA incidents occur outside of hospitals each year in the United States alone.
- Causes of sudden cardiac death in athletes/patients may not be consistent, but about two-thirds of the time they are due to a heart abnormality.
- SCA is NOT a heart attack someone who suffers a heart attack can still be responsive and breathe, while someone experiencing SCA is unresponsive and their heart has stopped beating



PREVENTION

- · Review your state SCA prevention acts.
 - Get in touch with your government affairs chair if there aren't any yet.
- Review and practice your emergency action plan (EAP).
- Ensure facilities are equipped with an automated external defibrillator (AED) and staff is trained in CPR and AED use.
 - Check the batteries in the AED regularly.
 - An AED can cover about five football fields, but you should consider obstacles that reduce the effective area an AED can cover.
- Consider common factors that put athletes at risk for SCA, such as family history, heart murmur or Marfan syndrome.

IN THE MOMENT

- Recognize SCA.
- Activate EAP and start CPR.
- · Remove restrictive clothing and apply AED.
 - Identify who's in command; a health care professional, such as an athletic trainer, should handle the situation.
 - Anticipate next steps in EAP and offer to help.
- Stay calm.

SIGNS AND SYMPTOMS OF CARDIAC ARREST IN ATHLETES

MALE ATHLETES	FEMALE ATHLETES		
Chest, ear or neck pain	Center chest pain that comes and goes		
Severe headache	Lightheadedness		
Excessive breathlessness	Shortness of breath with or without discomfort		
Vague discomfort	Pressure, squeezing, fullness		
Dizziness, palpitations	Nausea, vomitting		
Abnormal fatigue	Cold sweat		
Indigestion, heartburn	Pain or discomfort in arms, back, neck, jaw or stomach		

* Many young cardiac arrest victims have no symptoms until the cardiac arrest occurs. Keep in mind that anyone, regardless of sex or gender, can experience the symptoms listed above.

RETURN TO PLAY

- Patient should obtain written clearance from a qualified medical professional, such as a cardiologist, and a certified athletic trainer, if necessary.
- Gradually increase activity, rather than start with sudden or strenuous activity at the onset.
- Continue to monitor athlete for any recurring signs or symptoms of SCA.

SOURCES: CDC, Korey Stringer Institute, National Athletic Trainers' Association, Sudden Cardiac Arrest Foundation, University of Washington Medicine Center for Sports Cardiology

Infographic handout provided by National Athletic Trainers' Association



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Amherst community mourns death of Anna Burns, junior who suffered cardiac arrest after cross country meet

Updated: Sep. 21, 2022, 8:05 a.m. | Published: Sep. 20, 2022, 10:27 p.m.



The Nordic State Championships too signed in President Mountain in Woodford, Vermont on February 16, 2022. Here is Amherst's Anna Burns. (MEREDITH SERMA MASSIES to read later.

NEW!

By Meredith Perri | mperri@masslive.com

The Amherst and several Western Massachusetts athletic communities are in mourning this week after the death of Hurricanes junior Anna Burns.

According to Burns' <u>obituary</u>, they suffered cardiac arrest near the end of their cross country race against Ludlow on Sept. 13.

"We don't know why," Burns' family wrote in the obituary. "A team of bystanders and EMTs tried hard to revive Anna and they got a heartbeat back but their brain was without oxygen for too long and they never regained consciousness."

Amherst Superintendent Michael Morris sent a message announcing the news to members of the Amherst Regional School District Sunday evening.

"It is with great sadness that I share the news that Anna has passed away," Morris wrote, <u>according to the Hampshire Gazette</u>. "They were a part of the Crocker Farm family since they first started school, attended Middle School at ARMS, and were currently a member of the junior Class of 2024 at ARHS."

Saturday, members of the Amherst girls cross country team participated in the Amherst Invitational at Hampshire College. Several of the runners had "Run for Anna" written on their legs in honor of their teammate.

Along with cross country, Burns competed in Nordic and Ultimate.

"These were spaces where Anna could dream big, or not, and thrive with the support and encouragement of coaches and teammates," the obituary read.

Their obituary also states that Burns' organs were donated after their death.

"Anna also wanted to make a difference in this world," the obituary said. "They cared deeply about the environment and were part of the Sunrise Movement in Amherst that seeks to address climate change and hoped to combine their love of science to use chemistry, environmental science and engineering to be part of the climate solution.

"Mostly Anna cared. They cared deeply about their family, their friends, their teammates, their classmates, their world, and Max and Leo, the babycats. As Anna wished, and this wish is perfectly in their character, Anna's organs are being donated so that others may be helped by their loss."

Informal gatherings will take place Sept. 22 and Sept. 23 from 4 p.m. to 6 p.m., and Sept. 24 from 10 a.m. to 12 p.m. and 4 p.m. to 6 p.m., with a memorial service in the near future. More information about funeral events can be found here.

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How to protect your kids when they play sports, according to doctors

By Madeline Holcombe, CNN | Posted - Jan. 15, 2023 at 11:47 a.m.



Proper techniques, well-fitting gear and adherence to the rules are important to safety. (Getty Images)











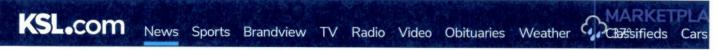






Estimated read time: 5-6 minutes

ATLANTA — Every time there is a head trauma, cardiac arrest, or other major injury among professional sports, parents take a deep breath.



Cardiac events during sports are uncommon for anyone, said Dr. Stuart Berger, division head of cardiology at Northwestern University Feinberg School of Medicine. While they can also occur in kids and teens, these injuries can happen whether or not people play sports.

While many children can get injured on the field, the numbers are mostly declining — and sports are important for their physical and mental health, doctors say. They explain how to prevent and treat sports injury in kids.

How many kids get injured playing sports

Overall injuries due to youth participation in football show a dramatic decline since 2013, plateauing in 2020 and heading back up in 2021, according to the most recent figures from the U.S. Consumer Product Safety Commission.

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More than a million kids ages 5 to 14 were injured in sports and required a trip to the emergency room, according to the commission. Along with sports like basketball, soccer and football, the agency also reported significant injuries from things like playground equipment and skateboards.

Children between the ages of 5 and 14 were most likely to be injured in football in 2021: There were 110,171 reported injuries in children ages 5 to 14 in 2021, compared to 92,802 in youth and young adults aged 15 to 24.



The sports with the highest rates of concussion were: boys' football, with 10.4 concussions per 10,000 athlete exposures; girls' soccer, with 8.19 per 10,000 athlete exposures; and boys' ice hockey, with 7.69 per 10,000 athlete exposures, according to a 2019 study.

High contact sports like hockey, football, lacrosse and martial arts might be higher risk for serious injuries such as head injury, but even seemingly safer sports like swimming and track pose some risk for overuse injuries. And they all can be made safer with the right strategy, said Dr. Erin Grieb, pediatric primary care sports medicine physician at Stanford Medicine Children's Orthopedic and Sports Medicine Center.

Here's what to do if your child plays sports.

What to look for

When it comes to cardiac events, screening is crucial, Berger said.

Generally, kids are safe to play sports and exercise without concern for cardiac events, but with all types of sports, it is important to do a physical with family history to identify those who might be at risk, he added.

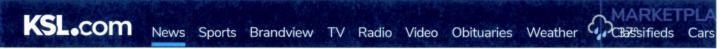
'The concerns are that maybe there is somebody with an underlying cardiac abnormality," Berger said. "The screening is designed to bring that out and that we can identify, if possible, who those kids are."

Head injuries are another major concern to families when it comes to putting their children in sports.

The bulk of concussions in kids are related to youth sports, said Dr. Andrew Peterson, clinical professor of pediatrics and director of primary care sports medicine at the University of Iowa.

The good news is that there is not strong evidence that a handful of concussions over a childhood is associated with long term impacts as an adult, he added.

But it is really important to avoid reinjuring the head before a concussion is fully healed.



Coaches, referees and families should learn how to spot a concussion to make sure their young athlete is properly cared for, Grieb said.

The signs and symptoms can be physical, including headaches or sensitivity to light; mental, with confusion or difficulty paying attention; emotional, with sadness and anxiety; or sleep related, she added.

It is important to remember that concussions can present in many ways, and just because you got certain symptoms in one concussion doesn't mean you will have the same ones in the next, Grieb said.

Prevention and response

To keep kids safe in sports, it's important focus on both prevention and response.

Even for high contact, high-risk sports, there has been a cultural shift to focus more rules and regulations on player protection and injury prevention, Grieb said.

Learning the proper techniques and wearing well-fitting gear can help lower the risk of serious injury in sports like football, hockey and lacrosse.

In almost any sport, kids should be given ample time to rest within the week and over the course of the year to avoid injuries that can come from overuse, she added.

With head injuries, it is important that young athletes take the proper time and action to recover before getting back to their sports, Grieb said.

"You break a bone, I can put you in a cast and not let you use that arm. When you have a head injury, I can't put your head in a cast," she said. "You get one brain, so it's really important that we let your brain heal."

In response to cardiac event, every person — player, coach or onlooker — should be familiar with CPR, or cardiopulmonary resuscitation, and how to use a defibrillator, Berger said.



Why children should still play

The takeaway message should not be to keep your kids from sports, Berger said.

There might be a conversation with your child about what sports they want to do, along with the risks and precautions your family will take, Grieb said, but it doesn't have to be all or nothing.

Sports and other physical activities for kids are important for building good habits to keep moving throughout their lifetime, Peterson said. And regular movement is part of growing up in a safe and healthy way, he added.

But sports also give our kids leadership skills, life lessons and fun, Grieb said.

"If you're focused on using proper techniques, you're focused on following the rules of the game and you have coaches and referees who are also engaged in that, then I think particularly risky sports can be safer than they have in the past," she said.

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Utah Red Cross urges CPR certification following Damar Hamlin injury





MURRAY, Utah — A life threatening injury to Buffalo Bills defender Damar Hamlin is shining the spotlight on the importance of learning CPR.

CPR, or cardiopulmonary resuscitation, is credited with helping save Hamlin's life after he suffered cardiac arrest during a game earlier this month.

Read: Utah Bills fans sending love to Buffalo after player suffers cardiac arrest

The technique is something everyone can learn.



The American Red Cross offers several classes online, in-person, or via a hybrid model to people of all ages and backgrounds.

"It's honestly just a few hours of training," said Mackenzie Jones, a disaster program manager for the Salt Lake chapter of the American Red Cross.

Jones is certified in administering CPR. While she has never been in a situation where someone's life is at risk, she is thankful she will be prepared if an incident ever arises.



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Read: Bills player incident all too familiar for former Utah State athlete

"We know it can happen at any time, anywhere, to anyone," Jones said.

According to the American Heart Association, only 10 percent of people who suffer cardiac arrest outside a hospital survive. However, the AHA data indicates, a victim's chance of survival doubles or triples if CPR is immediately administered.

"Every second, every minute counts," Jones said.

A list of CPR certification classes in Utah can be found here.

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WELLNESS → EDUCATION - September 30, 2022

Why young athletes may be more at risk for sudden cardiac arrest



Young athletes speak up about risk of sudden cardiac arrest



By Kaitlyn Folmer, Alexandra Myers, Haley Yamada









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"My brain hurt so bad," Meche told "Good Morning America." "And then, like, everything went black."



Haley Meche was 16-years-old when she went into sudden cardiac arrest.

Meche almost died from sudden cardiac arrest. She survived because she had known she had a heart condition and already had a defibrillator. Her doctors said that Meche's heart screening test detected her risk early – and saved her life.

Studies have also shown that sudden cardiac arrest is the leading medical cause of death in athletes.

According to the Centers for Disease Control and Prevention, approximately 2,000 young people die from sudden cardiac arrest each year — many without

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Jonathan Drezner, the head of the UW Medical Center for Sports Cardiology in Washington, to "GMA."



Josh Tetteh was diagnosed with a heart condition in 2021.

The risk is <u>nearly four times higher</u> in student athletes, according to Drezner. A risk that most athletes don't even know about, he said.

"Research shows that up to 80% of kids who suffer sudden cardiac arrest have no symptoms prior," said Drezner.

In Florida, non-profit "Who We Play For" is raising awareness around detecting risk earlier. They offer low-cost Electrocardiograms, or ECGs.

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Meche's school was one out of more than 150 schools in Florida that require student athletes to get an ECG before they play. Her doctors told her that early detection saved her life.

Similarly, Josh Tetteh was also able to detect a heart condition last year that, if gone unnoticed, could have led to sudden cardiac arrest.

He said he didn't have any symptoms so he wouldn't have known if it weren't for his preventative heart screening.

"My whole life was perfect," said Tetteh to "GMA." "We had this screening, they found something within my heart that is one of the reasons why athletes die."

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Dr. Jonathan Drezner is the head of the UW Medical Center for Sports Cardiology in Washington.

A majority of high schools across the country require student athletes to pass a thorough questionnaire endorsed by the American Heart Association (AHA) and a physical exam before playing sports. If a child is found at higher risk, guidelines call for additional testing and ECG.

Drezner said it's not enough.

"There is robust evidence that using that model for screening leaves the majority of kids at risk undetected," said Drezner.

The AHA told "Good Morning America" that it supports ECG testing for children at the highest risk, but stood by the current guidelines, which considers the latest research findings and patient safety.

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estimated \$2 billion that they said could be spent on other potentially life-saving interventions.

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Dr. Eli Friedman, the medical director of sports cardiology at Miami Cardiac and Vascular Institute, agreed with the AHA guidelines and he advocated for other interventions.

"It's not a tool for everybody. The infrastructure is definitely a concern that I have because there's disparities in our healthcare system," said Friedman to "GMA." "I advocate more than anything for emergency action planning, CPR and AED training."

The AHA said that it is an important area of study that needs more rigorous research and that there is concern that not all doctors are following screening guidelines.

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volunteers to help other kids who may be in the same situation.

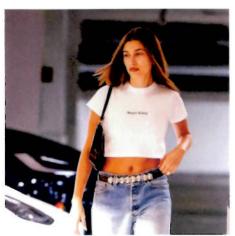
"After what happened to Josh, I volunteer. That's my way of saying thank you," she said to "GMA." "Can't wait to go to Mayville State and watch him on the field."

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USU athlete still hospitalized three weeks after mysterious collapse

Roman Ruiz probably wouldn't be alive if not for the quick actions of a passerby

By Doug Robinson | Mar 29, 2020, 6:08pm MST









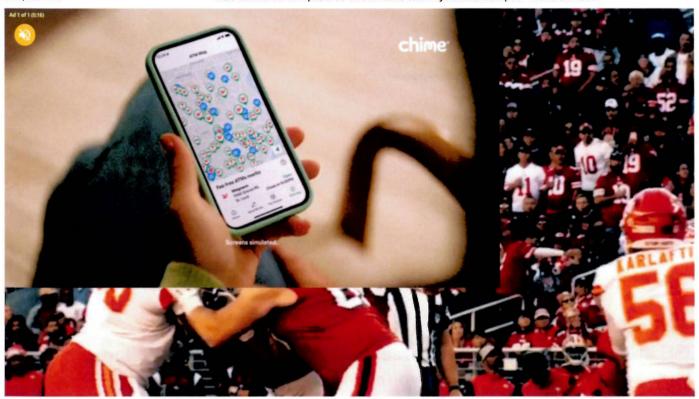
Utah State track and field athlete Roman Ruiz competes on the high jump in 2019 in Logan. | Wade Denniston

Since the day he mysteriously collapsed during a workout three weeks ago, Roman Ruiz, a sophomore track and field athlete at Utah State, has been confined to a hospital bed struggling to climb back to consciousness and return to life.

If not for a flat tire and a quick-thinking passerby, he probably would not be here at all.

Doctors told Ruiz's parents that their son had an anoxic (depletion of oxygen) brain injury caused by cardiac arrest, although they don't know what triggered the event. He was technically dead for 30 to 35 minutes. It took that long to resuscitate him - after a lengthy CPR procedure, three defibrillation attempts and a shot of epinephrine. The danger of oxygen deprivation of course is brain damage.

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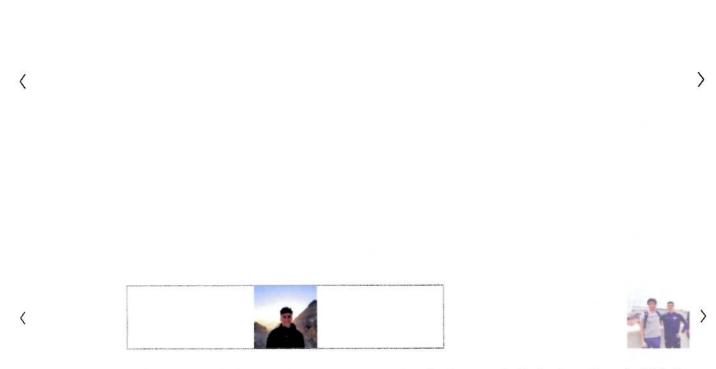
Ruiz was taken to Logan Regional Hospital then life-flighted to McKay-Dee Hospital in Ogden. He was put in a medically induced coma for several days. He spent nine days in ICU.

"It's been tough to watch," says Ruiz's father, Javier.



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Roman doesn't talk, but he can respond with a word or two occasionally. The family was excited when he exchanged a high-five with his nurse. When a nurse observed him thrashing restlessly with his arms, she teasingly asked him if he wanted to arm wrestle. He smiled and obliged. He also has said "dad" and "thanks." Progress is measured in small steps.

"He is in a minimally conscious state," says Javier. "It's part of the brain injury process."

Ruiz has competed in athletics since he was a young boy and never gave any indication there were underlying health issues. In high school competition in his native Pasco, Washington, he excelled in a wide range of track and field events, throwing the shot put 52 feet, pole vaulting 15 feet, 9 inches and covering the high hurdles in 14.38. This made him a natural for the collegiate multi-events — the seven-event heptathlon indoors, the 10-event decathlon outdoors.

After serving a church mission in Rome, Italy, he reported to USU for his freshman season and placed third in the heptathlon in the 2019 indoor conference championships and seventh in the decathlon in the 2019 outdoor conference championships.



John Bailey, a retired physician, discovered USU track athlete Roman Ruiz face down on the track on March 7, 2020, unresponsive. Bailey called 911 and started CPR until paramedics arrived. | Courtesy John Bailey

On March 7, he showed up at USU's Ralph Maughan Stadium. The track team was on spring break, but Ruiz was at the track that morning to get in a workout. As Ruiz warmed up, another man showed up at the track, 76-year-old John Bailey. As fate would have it, Bailey is a retired physician — he was director of Bear River Health for more than 30 years. He retired when he was diagnosed with a blood cancer called multiple myeloma.

Bailey had planned to take his first bike ride of the year because of the good weather, but as he pumped up the tires the stem on the back tire broke. He took the bike to a shop to have it repaired but was told he would have to wait a couple of hours. He left the bike at the shop and on the drive home decided on a whim to get his exercise at the track instead. It was the first time he had visited the track this year.

As he walked across the Utah State football practice field he saw Ruiz warming up on the side of the track. They were the only people there. "Nice morning, isn't it?" Ruiz said to him. Bailey replied, "Yes, it is," and, after leaving personal items in the bleachers, he began walking around the track. As he reached the backstretch he looked back across the track and saw that Ruiz was lying down, but figured he was resting.

Denver sol

He continued walking — at a pace of four minutes per lap — and as he drew closer to Ruiz he became alarmed. Ruiz was face down and was not moving. Something's wrong, he thought to himself. He ran to him. Ruiz was not breathing. Blood was coming out of one nostril and foamy material was in his mouth. Bailey shook him and shouted, trying to wake him. There was no response. He ran back to the bleachers to get his cell phone and as soon as he returned to Ruiz's side he called 911 and gave directions where to find him.

Bailey rolled Ruiz onto his back and began chest compressions while hearing sirens in the distance. He continued the CPR for several minutes and began to tire. "I knew I had to do it very vigorously," he said. "I thought the most crucial thing was that he receive vigorous chest compressions. I was hoping he had enough oxygenated blood in his system to reach his brain." Bailey stopped briefly a couple of times to reassess the patient's status; Ruiz still was not breathing.

A man arrived in a pickup track — Bailey is still not certain who he was — and took over the compressions, asking Bailey to go to his truck to retrieve a mask used for mouth-to-mouth resuscitation. By the time he returned, several emergency personnel had driven onto the track and were giving CPR and administering drugs and eventually defibrillation until Ruiz finally responded.

The prognosis for Ruiz is uncertain. "So far the doctors don't know what caused it," says Javier. "They've done some genetic testing, but it takes months to get the results. I'm not aware of anything like this in our family on either side."

Meanwhile, not much can be done to relieve Roman's obvious discomfort and restlessness. According to Javier, his son can't be sedated because doctors need him to be as coherent and responsive as possible to determine his needs and to assess his mental status.

His parents believe prayer has carried him this far — and Bailey. Ruiz's parents called Bailey to thank him. Ruiz's mother Verna says it was a miracle that Bailey was there, especially on a Saturday during spring break when the campus is empty. "John Bailey is a life saver and we are eternally grateful for him," she says. "Roman is meant to be alive and continue his goodness to everyone because John was there."

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Ruiz's parents were not aware that Bailey is a retired physician until they learned of it three weeks after their son's collapse.

"Oh, wow, we didn't know that," Javier wrote in a text message,

"It does give you pause. I have reflected on it. I had no intention to go to the track that day. I had not been there this year because of the snow. And we (he and Ruiz) were the only people there." — John Bailey

"It does give you pause," says Bailey. "I have reflected on it. I had no intention to go to the track that day. I had not been there this year because of the snow. And we (he and Ruiz) were the only people there."

Teammate Sam Nelson started a GoFundMe page for Ruiz to help meet expenses. The Ruiz's family insurance doesn't cover all of the considerable costs of their son's care and they have been informed that the school's insurance for its athletes does not apply in this case because he was not participating in an official school workout. That's a debatable position to take. Coaches in all sports routinely prescribe workouts for athletes to do on their own when their teams can't meet — including during spring break — even though they are "voluntary." This could be fodder for lawyers.

Meanwhile, only time will tell how Ruiz recovers from this event. Aspen Drecksel, Roman's teammate and close friend, has visited with him several times via FaceTime in what is understandably a one-sided conversation. The first time they talked he managed to say "what?" The last time he talked he mouthed the word "Bye."

"I can see that he's in a lot of pain," says Drecksel. "And he's lost a lot of weight. It's hard to see him like that. He's seriously the best guy. He always finds ways to serve other people and make them smile."

Meanwhile, family and friends continue their long wait to see what lies ahead for Roman Ruiz.

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